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U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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Gordon P. Eaton, Director

Reston, VA 20192

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For information call:

Thomas S. Jones, Manganese Specialist (703) 648-4973; FAX (703) 648-7757

Manganese, Monthly

**For MINES-DATA computer bulletin board call:**

(703) 648-7799 (2400,N,8,1) for computer access; (703) 648-7943 for technical assistance

**For MINES FaxBack system dial:** (703) 648-4999 from touch-tone handset (non-ISDN) of fax machine; document numbers are 420100 for manganese catalog, 420007 for this report. For assistance, call (703) 648-7728

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## MANGANESE IN JULY 1996

In July, reported consumption of manganese ore containing 35% or more manganese, exclusive of that at iron and steel plants, was 17,900 metric tons, which was only about one-half that of the previous month, according to the U.S. Geological Survey. This brought the year-to-date total to 231,000 tons. These figures increase to 22,400 and 262,000 when estimates for annual respondents are added on the basis of 1994 data. Corresponding industry stocks of ore at the end of the month were estimated as 310,000 tons, which includes an estimate for annual respondents based on 1994 data. This was an increase of about 3% in comparison with the corresponding figure for stocks at the end of June. (Data for the most recent 13 months are graphed on page 3.)

This report contains data on domestic consumption and stocks of manganese ferroalloys and metals for the April through June quarter of 1996 (table 8).

Foreign trade data for July will appear in a subsequent report. The data for June tabulated in this report indicated for 1996 to date that, on a preliminary basis, imports of medium-carbon ferromanganese and exports of manganese ore already had exceeded the corresponding quantities for all of 1995. Ore exports for June were the greatest since those for July 1991.

The Defense Logistics Agency (DLA), U.S. Department of Defense, reported for July a cash disposal from the National Defense Stockpile under DLA-ORES-071 of 544 tons of natural battery-grade manganese ore, all to Prince Manufacturing Co., Quincy, IL. Update.--As of August 28, DLA issued Solicitation for Offers DLA-FERROMANGANESE-001 for sale of manganese ferroalloys, principally high-carbon ferromanganese. The material being offered for sale for the remainder of Fiscal Year 1996 (ends September 30, 1996) comprised 42,910 tons of high-carbon ferromanganese, 2,268 tons of medium-carbon ferromanganese, and 181 tons of silicomanganese. Material for sale during Fiscal Year 1997 (begins October 1, 1996) comprised 40,823 tons of high-carbon ferromanganese and 4,536 tons of medium-carbon ferromanganese. Many sale conditions were negotiable, and long-term contracts for up to 5 years would be considered. The minimum offer for ferromanganese was 454 tons, and sale of high-carbon ferromanganese was restricted to domestic producers of manganese ferroalloys for remelting. Bids for the initial offering were due to DLA by 10:00 a.m. on September 16, 1996. Subsequent offerings for unsold material were to be held indefinitely on the fourth Tuesday of each month. The DLA contact person for inquiries about the offering is Jennifer Iribarren, telephone number (703) 767-5487.

In Australia, Portman Mining Ltd. announced in a July 1 statement to the Australian Stock Exchange that agreement had been reached for sale of their Pilbara Manganese Project (PMJ) in Western Australia to Valiant Manganese Pty. Ltd., a subsidiary of Valiant Consolidated Ltd. The sale included the Woodie Woodie Mine and everything connected with the PMJ except for

stockpiles of lump manganese ore. Valiant was to manage these stockpiles until October 31, 1996, so as to meet Portman's existing sales contracts with Japan's Mitsui & Co. Ltd., at which time Valiant was to purchase the remainder of the stockpiles. This action by Portman ended its involvement in manganese ore mining in Australia, which had begun in 1990 in Western Australia with production from previously mined areas.

#### Notices

Early availability of foreign trade statistics via FaxBack: The June trade data appearing in this report were placed on FaxBack in preliminary form as of August 27. The FaxBack document number for these preliminary tables was 420206.

Availability of manganese monthly report via the World Wide Web: This monthly report is obtainable via the World Wide Web through the Minerals Information home page address given above: <http://minerals.er.usgs.gov/minerals>

TABLE 1  
SELECTED U.S. FOREIGN TRADE IN MANGANESE 1/

(Metric tons, manganese content) 2/

	Imports for consumption			Exports		
	Ore and dioxide	Ferroalloy and metal	Total	Ore	Ferroalloy and metal	Total
1995:						
June	13,900	32,700	46,700	116	1,480	1,600
January-June	78,400	221,000	300,000	3,820	10,800	14,600
1996:						
January	8,860 3/	47,100 3/	56,000	386	1,540	1,930
February	1,410 3/	36,200 3/	37,600	1,620	1,670	3,290
March	14,400 3/	46,900 3/	61,300	466	1,610	2,080
April	32,500	61,400 3/	93,900	1,250	1,760	3,010
May	20,400 3/	46,800	67,200	2,240	1,630	3,870
June	26,300 3/	45,000 3/	71,300	2,550	1,230	3,780
Total	104,000	284,000	387,000	8,510	9,440	17,900

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ As reported except as estimated for imports of manganese dioxide and manganese waste and scrap and for exports from gross weights.

3/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN JUNE 1996 1/

(Metric tons)

Source	Gross weight	Mn content	Customs value	Year to date		
				Gross weight	Mn content	Customs value
Argentina	--	--	--	7,490	4,870	\$4,910,000
Australia	1,300	877	\$577,000	26,500	17,700	18,700,000
France	2,480	1,650	1,310,000	18,400	12,200	9,790,000
Georgia	--	--	--	1,260	884	701,000
India	5,830	3,700	3,300,000	30,000	19,400	18,500,000
Kazakstan	--	--	--	4,000	2,290	2,300,000
Macedonia	--	--	--	11,000	7,460	4,910,000
Mexico	2,700	1,760	1,380,000	12,000	7,840	7,820,000
Norway	149	91	140,000	3,550	2,110	3,400,000
Poland	--	--	--	3,040	2,100	2,050,000
Romania	2,780	1,830	1,300,000	10,900	7,310	6,150,000
Russia	--	--	--	1,200	778	597,000
South Africa	1,270	933	728,000	44,200	30,200	28,400,000
Spain	1,000	627	979,000	1,800	1,130	1,720,000
Venezuela	2,600	1,720	1,280,000	12,800	8,380	8,390,000
Total	20,100	13,200	11,000,000	188,000	125,000	118,000,000
Total, general imports	18,900	12,400	10,400,000	191,000	126,000	120,000,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN JUNE 1996 1/

(Metric tons)

Source	Gross weight	Mn content	Customs value	Year to date		
				Gross weight	Mn content	Customs value
Low carbon:						
Bangladesh	--	--	--	28	24	\$16,700
Belgium 2/	4	4	\$2,610	20	17	11,800
Brazil	--	--	--	20	17	39,000
Canada	--	--	--	42	34	53,000
Italy	594	532	967,000	2,570	2,300	4,160,000
Japan	--	--	--	1,980	1,630	2,130,000
Norway	--	--	--	370	299	461,000
South Africa	120	109	230,000	1,540	1,420	2,650,000
Total, low carbon	719	645	1,200,000	6,570	5,730	9,520,000
Total, general imports of low carbon	714	641	1,200,000	6,560	5,730	9,520,000
Medium carbon, 1% -2% C:						
Brazil	2,560	2,060	2,120,000	3,890	3,120	3,320,000
China	2,460	2,000	2,020,000	6,470	5,230	5,120,000
France	--	--	--	2,500	2,040	1,960,000
Japan	--	--	--	15,100	12,200	11,900,000
Mexico	2,490	2,000	2,050,000	13,500	10,900	11,200,000
South Africa	1,590	1,270	1,370,000	3,500	2,820	3,060,000
Total, m.c., 1% -2% C	9,110	7,320	7,550,000	45,000	36,200	36,500,000
Total, general imports of m.c., 1% -2% C	9,110	7,320	7,550,000	45,000	36,200	36,500,000
High carbon:						
Australia	--	--	--	18,600	13,900	7,460,000
Brazil	6,090	4,660	2,540,000	14,900	11,100	6,200,000
France	12,500	9,730	5,360,000	50,800	39,800	23,900,000
Mexico	--	--	--	6	5	3,650
Norway	--	--	--	56	45	66,500
South Africa	11,000	8,610	4,840,000	59,900	46,800	27,100,000
Total, high carbon	29,500	23,000	12,700,000	144,000	112,000	64,700,000
Total, general imports of high carbon	29,500	23,000	12,700,000	144,000	112,000	64,700,000
Grand total	39,400	31,000	21,500,000	196,000	154,000	111,000,000
Grand total, general imports	39,400	31,000	21,500,000	196,000	154,000	111,000,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 4  
U.S. IMPORTS 1/ OF MANGANESE ORE (20% OR MORE MN) IN JUNE 1996 2/

(Metric tons)

Source	20% - 47% Mn		47% or more Mn		Total	
	Gross weight	Mn content	Gross weight	Mn content	Gross weight	Mn content
Australia	--	--	31,100	16,200	31,100	16,200
Gabon	--	--	22,900	7,600 3/	22,900	7,600
Mexico	1,100	401	120	78 3/	1,220	479
Total	1,100	401	54,100	23,900	55,200	24,300
Year to date:						
Australia	--	--	68,500	34,500	68,500	34,500
Gabon	--	--	98,000	39,200	98,000	39,200
Mexico	20,200	7,490	200	131	20,400	7,620
South Africa	--	--	27,000	12,900	27,000	12,900
Total	20,200	7,490	194,000	86,700	214,000	94,200

1/ Quantities for general imports and imports for consumption are identical.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE AND MANGANESE METAL IN JUNE 1996 1/

(Metric tons, gross weight)

Source	Manganese dioxide				Manganese metal			
	Quantity	Customs value	Year to date		Unwrought		Other	
			Quantity	Customs value	Quantity	Year to date	Quantity	Year to date
Australia	2,880	\$3,970,000	11,700	\$16,600,000	--	--	--	--
Austria	--	--	2	4,080	--	--	--	--
Belgium	92	167,000	628	1,080,000	--	--	19	19
Brazil	--	--	254	349,000	--	--	--	--
Canada	--	--	5	7,940	--	--	--	7
China	--	--	17	19,600	80	420	--	--
France	--	--	--	--	--	--	--	43
Germany	8	37,900	34	152,000	--	--	11	143
Ireland	280	392,000	2,790	3,900,000	--	--	--	--
Japan	--	--	6	16,400	--	--	--	--
Mexico	4 2/	6,480 2/	4	6,480	--	--	--	--
Russia	--	--	--	--	1	1	--	--
South Africa	--	--	153	240,000	767	4,130	--	260
Ukraine	--	--	--	--	--	20	--	--
United Kingdom	--	--	360	504,000	--	--	--	152
Total	3,260	4,570,000	16,000	22,900,000	848	4,570	30	624
Total, general imports	3,260	4,570,000	16,000	23,000,000	884	4,870	30	624

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ All or part of these data have been referred to the Bureau of the Census for verification.

Note: Imports for consumption of metallic manganese waste and scrap totaled 8 tons, all of which was from Mexico, to give a year to date total of 114 tons.

Source: Bureau of the Census.

TABLE 6  
U.S. EXPORTS OF MANGANESE ORE (20% OR MORE MN), FERROMANGANESE, SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN JUNE 1996 1/

(Metric tons, gross weight)

	Manganese ore		Ferromanganese, 2% or less C		Silicomanganese		Manganese metal 2/	
	June	Year to date	June	Year to date	June	Year to date	June	Year to date
Australia	--	142	--	--	--	2	--	--
Belgium	--	2,090	--	--	--	--	--	74
Bolivia	--	3	--	--	--	--	--	--
Brazil	--	--	--	12	5	5	--	46
Canada	367	2,510	315	3,150	529	3,450	70	515
China	1,630	5,620	--	--	--	--	--	--
Colombia	--	--	18	31	--	--	--	3
El Salvador	--	354	--	--	--	--	--	--
France	678	678	--	94	--	--	117	245
Germany	478	478	--	--	--	--	19	95
Hong Kong	--	--	6	6	--	--	--	1
India	--	153	--	--	--	--	41	41
Italy	--	--	--	--	--	--	--	16
Japan	586	1,680	--	--	--	--	161	538
Korea, Republic of	--	519	--	--	--	--	13	91
Mexico	--	134	26	132	3	257	12	222
Netherlands	--	--	--	--	5	139	18	342
Sweden	1,360	2,500	--	--	--	--	18	53
Taiwan	--	--	--	--	--	--	39	39
Trinidad and Tobago	--	159	--	--	--	--	--	(3/)
United Kingdom	--	(3/)	--	--	--	--	20	737
Venezuela	--	--	10	14	--	--	--	--
Total	5,090	17,000	375	3,430	541	3,850	528	3,060

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes manganese-aluminum, some other alloys, and waste and scrap.

3/ Less than 1/2 unit.

Note: Exports of ferromanganese with more than 2% carbon totaled 64 tons, of which 56 tons went to Canada and 8 tons went to Mexico, to give a year to date total of 1,420 tons.

Source: Bureau of the Census.

TABLE 7  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN JUNE 1996, BY CLASS 1/

Class	Gross weight (metric tons)	Value 3/ (thousands)	Principal sources and destinations: gross weight (metric tons); value (thousands) 3/	Year to date p/ 2/		
				Gross weight (metric tons)	Value 3/ (thousands)	Principal sources and destinations: gross weight (metric tons); value (thousands) 3/
Imports for consumption:						
Manganese oxides other than dioxide	102	\$215	South Africa 36; \$94	535	\$1,290	South Africa 216; \$563
Sulfates, basket category, including manganese sulfate	3,110	1,490	Mexico 1,850; \$787	13,000	7,040	Mexico 9,160; \$4,420
Potassium permanganate	97	198	Spain 39; \$94	555	1,060	Czech Republic 270; \$507
Manganites, manganates, and other permanganates	1	6	Canada 1; \$6	9	29	Canada 9; \$29
Exports:						
Manganese dioxide	216	156	Canada 168; \$75	1,660	1,770	Canada 874; \$404
Manganese oxides other than dioxide	628	600	Canada 361; \$161	3,910	3,930	Canada 1,840; \$808
Sulfates, basket category, including manganese sulfate	1,710	1,000	Canada 1,350; \$427	10,600	6,910	Canada 8,670; \$2,780
Potassium permanganate	21	60	Canada 20; \$40	279	691	Germany 121; \$297
Manganites, manganates, and other permanganates	23	168	Germany 18; \$134	141	732	Germany 79; \$369

p/ Preliminary.

1/ Data are rounded to three significant digits.

2/ May include revisions to previous months' data.

3/ For imports, Customs value; for exports, f.a.s. value.

Source: Bureau of the Census.

TABLE 8  
U.S. CONSUMPTION, BY END USE, AND INDUSTRY STOCKS OF  
MANGANESE FERROALLOYS AND METAL IN APRIL THROUGH JUNE 1996 1/

(Metric tons, gross weight)

End use	Ferromanganese		Total	Silico- manganese	Manganese metal
	High carbon	Medium and low carbon			
Steel:					
Carbon	43,900	17,000	60,900	19,800	540
Stainless and heat-resisting	3,140	37	3,180	1,680	395
Full alloy	5,410	1,280	6,690	6,060	(2/)
High-strength, low-alloy	4,600	970	5,570	2,170	(2/)
Unspecified 3/	76	(4/)	76	72	92
Total steel	57,200	19,300	76,400	29,800	1,030
Cast irons	1,710	111	1,820	106	--
Superalloys	(4/)	--	(4/)	--	31
Alloys (excluding alloy steels and superalloys)	(4/)	(4/)	(4/)	W	4,200
Miscellaneous and unspecified	156	40	196	W	(5/)
Total consumption, end of period	59,000	19,400	78,500	29,900	5,250
Average daily consumption rate, tons per day	649	214	862	328	58
Total consumption, year to date	119,000	40,000	159,000	60,800 6/	10,600
Stocks, June 30:					
consumers and producers	24,400	9,100	33,500	11,400	3,340

W Withheld to avoid disclosing company proprietary data.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Withheld to avoid disclosing company proprietary data; included in "Steel: Unspecified."

3/ Includes electrical and tool steel, and items indicated by (2/).

4/ Withheld to avoid disclosing company proprietary data; included in "Miscellaneous and unspecified."

5/ Withheld to avoid disclosing company proprietary data; included in "Alloys (excluding alloy steels and superalloys)."

6/ Internal evaluation indicates that silicomanganese consumption is considerably understated.